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Notes on the Housing Problem in England with some Lessons for Canada

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YOUR secretary sometime ago approached me with a request that I should address this gathering on some phase of public health work and it occurred to me that the present movement in England toward the betterment of housing conditions would afford a profitable subject for our consideration. The limitation of time which has been set upon all papers renders it impossible to deal fully with this subject. I will therefore have to forego any discussion of the conditions existing prior to 1851 although the century preceding is possibly one of the most interesting in the history of the British Empire, being the period in which the industrial expansion of England was most evidenced and in which the transition from rural conditions to the urban congestion consequent upon an undreamed of growth, brought about many of the evils which the early workers in the service of public health sought in a measure to correct.

It is also impossible to deal with the mortality or morbidity statistics associated with this housing problem although they are indeed a very fruitful source of information. I must pass over them with the scant statement that the decrease in mortality and the increase in the balance between death and birth rates during the first decade of organized effort more than compensated the workers for their efforts and emphasizes the menace of a *laissez-faire* attitude of the Government toward this and like questions.

The housing conditions of the working classes existing in England in 1851 were probably more appalling than in any previous period in the history of the country nor was England alone. It was equally true of almost every newly created industrial continental centre.

The prevalent low wage paid to labourers does not appear to have been the main cause for in New York, (John Griscom—Report of the

New York Board of Health, 1842) which was then noted for its high wages, upwards of 33,000 of the population lived in cellars, courts and alleys of which over 6,618 were dwellers in cellars.

If one were able to draw a picture of the housings of the working classes some seventy years ago, and show in detail the appalling lack of all conveniences which make toward the decencies of life, and could picture families of five, six and seven eating, living and carrying-on industrial occupations in the same room with an interruption consequent upon a death in the family, and perhaps portray the deplorable consequences of the practice of retaining the body long periods in order that proper respect might be paid, and to permit the friends to gather to the funeral, which was by custom amongst the working classes, held only on Sundays, we might then realize how Edwin Chadwick, a Poor Law Commissioner, was lead to plead in and out of season for Government inquiry. He succeeded and in 1842 Lord John Russell, the Principal Secretary of State for the Home Department, authorized two inquiries, one into the sanitary conditions of the labouring classes of Great Britain, and the other as to the manner of interment in the towns.

Both inquiries were directed by Chadwick, and revealed facts so appalling that consequent upon the distribution of the reports a General Board of Health was created in 1848. The Board, the first of its kind in England, lasted until August 5th, 1854, when it was dismissed and Chadwick retired on a pension.

The entries appearing in Lord Shaftesbury's diary:

"May 14th, 1852 *The Times* has taken up the note of the undertakers, the water companies, the parliamentary agents, and the whole tribe of jobbers who live on the miseries of mankind and are hunting the Board of Health through brake and briar and hope to be "in at the death"! Be it so; if we fall, not a body will be left to shout "Unclean, unclean!" and form, guide and impel public opinion. Matters will become worse and worse. I tremble for the issue. Walked yesterday to review my old haunts in Westminster, and look at the wretched children in Pye Street—sick, sick, sick, to see how little years of labour had done" . . .

"November 17th, Grieved to learn that not only nothing is done by the Government, but that the ministers shall take good care that nothing shall be done by any one else: the Board of Health is to be destroyed, its sin is its unpardonable activity." . . .

"August 9th, 1853. It is not wonderful, though sad, when we remember the interests that it has been our duty to approach and handle. We roused all the Dissenters by our Burial Bill, which, after all, failed.

"The Parliamentary Agents are our sworn enemies, because we have reduced expenses, and, consequently, their fees, within reasonable limits.

"The Civil Engineers also, because we selected able men, who have carried into effect new principles and at a loss salary.

"The College of Physicians, and all its dependencies, because of our independent action and singular success in dealing with the cholera, when we maintained and proved that many a poor law medical officer knew more than all the flash and fashionable doctors of London.

"All the Boards of Guardians; for we exposed their selfishness their cruelty, their reluctance to meet and to relieve the suffering poor, in the days of the epidemic.

"The Treasury besides; for the subalterns there hate Chadwick; it was an ancient grudge and paid when occasion served.

"There are the Water Companies, whom we laid bare and devised a method of supply which altogether superseded them.

"The Commissioners of Sewers, for our plans and principles were the reverse of theirs; they hated us with a perfect hatred." . . . are by no means an uncommon reflection as to the inability of Government Bureaus to proceed against vested interests without strong public support.

The public conscience of England rudely awakened by the reports and inquiries of the General Board of Health 1842-56, seems to have gradually stirred itself for we find a series of enactments dating from 1851 dealing with the housing of the labouring classes. A brief summary of the Acts may not be out of place:

1851—An Act for the well-ordering of Common Lodging Houses dealt with the registration of the keepers of lodging houses and provided for authorities passing regulations similar to Local Boards of Health under the Act of 1848; and provided for keepers reporting the presence of contagious diseases on their premises.

1851—An Act to encourage the establishment of well-ordered Lodging Houses for the labouring classes, this as an adoptive Act and endowed local commissions with corporate powers in order that they might borrow money on municipal rates for the purpose of purchase, erection or operation of lodging houses for the labouring classes. The Commission had no power of condemnation or of expropriation. They were authorized to undertake the business of lodging house keepers and could levy rates to cover any losses that might accrue.

1853—Amendments to the Common Lodging Houses Act to strengthen it by providing against the registration of improper persons as keepers of Common Lodging Houses, for requiring the owner to obtain and water

companies to furnish proper water supplies, and setting forth penalties.

1855—The Nuisances Removal and Diseases Prevention Act.—Overcrowding in houses included as nuisances. Part 11, sec. 29.

1866—An Act to amend the law relating to Public Health known as the Sanitary Act—provided that the sewer authorities may undertake or contract for a supply of water for the use of the inhabitants of the district. Provision made to compel owners to connect premises to sewers and most important the Nuisance Authority was empowered to make regulations.

(1) For fixing the number of persons who may occupy a house or part of a house which is let in lodgings or occupied by members of more than one family.

(2) For the registration of houses thus let or occupied in lodgings.

(3) For the inspection of such houses and the keeping of same in a cleanly and wholesome state.

(4) For enforcing therein the provisions of privy accommodation and other appliances and means of cleanliness in proportion to the number of lodgings and occupiers, and the cleansing and ventilation of the common passages and staircases.

(5) For the cleansing and lime-whiting at stated times of such premises and for the enforcement of the regulation by penalties.

1866-67—The Labouring Classes' Dwelling Houses Act amending the Act of 1851 providing further methods of financing.

1868—An Act to provide better Dwellings for Artizans and Labourers. This Act fixed the responsibility upon the owners, of maintaining houses in a proper condition, and prescribed the steps to be taken to obtain the execution of the necessary works by the owner, or failing that by the authority itself. In the event of neglect on the part of the authority, the Secretary of State was empowered to intervene.

1875—An Act for facilitating the Improvement of the Dwellings of the Working Classes in large towns. This Act permitted authorities upon suitable representation of the Medical Officer of Health to condemn whole areas as unsanitary and provide for its re-planning and, if necessary undertake the actual work of re-construction subject to certain provisions, requiring the authority to re-house the dispossessed people within the same area. The property so improved was to be disposed of within a period of ten years.

1879—Amending Act of 1868—outlining the basis of compensation and provided that an owner might, upon the service of an order to execute works or demolish premises, require the authority to purchase such premises.

1879—(1875)—Amendment of the foregoing providing for the rehousing elsewhere than in the limits of the demolished area.

1882—Artizans' Dwellings Act embracing and consolidating the amended Acts of 1879 and dispensing with certain provisions in the Act requiring accommodation of persons deplaced under any scheme. The Act provided for the acquisition of buildings of which the demolition would provide ventilation and sunlight for adjacent property.

1885—The Housing of the Working Classes Act, amending previous Acts, dealing with the subject, and centralizing the work of several authorities such as vestries and district boards in case of London in a Metropolitan Board of Works.

1890—The Housing of the Working Classes Act—the final Act of this series. Amended as to certain provisions in 1894 and 1900.

1903—The Housing of the Working Classes Act transferring supervisory control of all schemes to the Local Government Board, together with other amendments.

1909—The Housing, Town Planning etc., Act, 1909.

You will observe from this summary that the Acts follow in natural sequence and that their realtion one to another was indicative of a growing public appreciation of the magnitude of the housing question. You will further observe that not until 1868 was it provided that where properly constituted authorities failed in their duty, the Secretary of State was empowered to intervene. It is apparent from the wording of this amendment that the committee reporting on its provisions were impressed with the need of something more than the local initiative of the authorities upon whose shoulders hitherto, the sole responsibility for action had rested.

Town planning appears to have been conceived somewhat as we witness it to-day by the Act of 1875. It is true that it was somewhat limited in that it was proposed to use unsanitary conditions as the excuse for the condemnation of large areas. The Act was not fully taken advantage of until after 1879, when an amendment removed certain restrictions as to the re-housing of the dispossessed in the same area.

With the information at my disposal I have been unable to determine the purpose of the amendment of 1879, which required the authority on the request of the owner to purchase property subject to condemnation proceedings. Having in mind the attitude of the British public toward established rights it might be interpreted as an effort to expedite building where the owners were unable, through financial embarrassment or disinclination, to proceed with the suggested work as quickly as the situation warranted. Interpreted in that way it reflects considerable credit on the framers of the amendment and appears to be a considerable step forward in town planning.

The amending Acts following in 1882-85-90-1903-1909 are all Acts providing for further supervision and control of schemes, centralization of efforts under one authority which before had been divided between vestries and district boards forming part of larger corporations, and in defining more clearly methods of finance and procedure.

It is necessary in looking back to appreciate that the situation as regards housing, was much complicated in the transition period of which we are speaking, by reason of the fact that the housing in cities then resembled very much the housing as it exists to-day in rural communities, that is, water supply was not laid on to the premises being obtained either through the use of wells located on public streets or from taps in courts. Taps, seldom indeed, were to be found in tenements erected prior to 1853.

It was not uncommon in cities such as London, Liverpool, Glasgow and Dublin, to have as many as forty to seventy persons living in some twelve back to back tenement houses, facing an interior court; their common water supply, a tap or pump and their only sanitary conveniences—two pit closets situated at the top of the court, usually in an unspeakably filthy condition.

Lest you might think these conditions were the exception, it is a matter of record that in Liverpool alone there were some 22,000 such houses and that in 1850, as much as one-fifth of the whole population of that city existed in like property. Such a state of affairs cannot readily be corrected even in our day, and at that time the problem was further complicated by a heritage of old substantial family houses, pretentious in their day but which, due to lack of succession or to the shifting of fashionable centres, gradually developed into property suitable only for lodging house purposes.

The cost of demolishing property structural sound, is as a rule, too considerable to warrant its being done for the purpose of erecting model dwellings unless rents can stand the added expenditure. This is not the case when dealing with housing for the labouring classes, and an endeavour has been made to slightly remodel the interiors to comply with by-laws and to permit of as much congestion as possible in these remodelled quarters.

In Edinburgh, on High Street, in the lower Cannongate and the areas adjacent, much property of this latter type is to be seen. One of the architects interested in town planning and rehousing schemes, informed me that the cost to-day of remodelling old premises in Edinburgh, was generally in excess of the cost of building entirely new places of the same accommodation, but rather than have derelict or unoccupied property this expenditure is being frequently made and the proprietors must content themselves with a small return on the land investment.

Far be it from me to cast any reflections upon those noble bands of public health exponents or upon those gentlemen who have served as Housing Commissioners and gone down to nameless fame without seeing the culmination of their efforts in the knowledge of social hygiene, which to-day is our proud possession, but I could not help observing, travelling as I did for the first time through the industrial centres of England, that the efforts of local authorities toward housing the working classes, whilst correcting and improving sanitary conditions and sanitary administration has succeeded in doing but little else.

To-day National Boards in England and Scotland are giving a great deal of thought to the question of further housing accommodation for the working classes, and it is with no feeling of national pride they refer to the statistics of the Census of 1911 which shows: 22.9% of the population of Dublin living in one-room tenements with an average of 3.18 persons per room, or to 46.9% of the population of Glasgow living in two roomed tenements with an average of 2.43 persons per room, or to 29.6% of the population of Edinburgh living in two-roomed tenements with an average of 2.16 persons per room, and to the fact that over 40% of the population of the cities of Glasgow, Edinburgh, Dublin, and London are living in tenements of three rooms or less.

The following interesting statement occurs in a recent report of a Departmental Committee of the Local Government Board for Ireland, Housing Conditions, 1914:

"It was put before us by many witnesses that it would be prejudicial to the best interests of the City of Dublin that the Municipality or State should undertake building, and it was urged that every encouragement be given to private enterprise. Up to the year 1907 there might have been some grounds for holding that with a little further encouragement, private enterprise would have to some extent supplied the deficiency of housing accommodation, but we have now little hope that it would be in any appreciable degree sufficient to grapple with the present needs of the city.

We are aware that it is held that from a strict economic point of view the sound attitude to take up would be, while stringently enforcing the sanitary laws, and perhaps strengthening them in some respects to allow the problem to be solved by the ordinary law of supply and demand. We cannot, however, shut our eyes to the fact that legislation has for some time past tended to show that the State recognizes that the strict economic treatment of the question does not meet with the necessities of the case. The legislation for the providing of proper housing accommodation for the labourers in the rural districts of Ireland, which has been attended with such great success, would seem to indicate that the State not only recog-

nizes that it has a duty in regard to the provision of loans to enable local authorities to build, but that it has a direct share in the responsibility of providing the houses as it gives two free grants, one of 16 per cent., and the other of 20 per cent. or in all 36 per cent. of the total amount of the repayment on monies advanced.

It might be held therefore, if the State has taken on itself a duty in regard to the rural labourer, that on proof of the conditions of the urban labourer being as urgent, it should be willing to undertake similar obligations on his behalf."

Report of the Departmental Committee, Local Government Board for Ireland, Housing Conditions, 1914, page 21.

So much for the discouraging side of the problem.

We must thank the philanthropy and public service of such men as Mr. Ebenezer Howard; Sir Ralph Neville, Mr. George Cadbury and Sir William Lever and the untiring zeal and energy of Mr. Thomas Admas, the first secretary of an association which, through well directed publicity, did much to carry the Town Planning experiments at the Hampstead Gardens Suburb, Letchworth and in other centres such as Bournville (outside Birmingham) and Wavertree Gardens (in Liverpool) to happy fruition.

The ideals of this most modern movement I think are most aptly expressed by Mr. Raymond Unwin, F.R.I.B.A. as an effort to determine whether "*by proper planning it may be arranged that all classes of the community should live together in such close relationship that even the smaller units of social life such as a parish, should contain a sufficiently wide variety of types and classes of people to produce a healthy, interesting and open-minded society*".

In England to-day the novelty of the Garden City enterprises has worn off and it appears increasingly difficult either privately or co-operatively to finance expansion along such lines, not so much on account of the actual amount of money required but on the obtaining it through private sources and subject to interest bearing restrictions. And it is my impression that unless public or trust monies subject to Government supervision can be diverted into such channels, Garden City development will not go forward as rapidly as public demand for this class of property will warrant.

The great lesson which we have to learn in Canada from these enterprises is that architectural restraint in the planning of groups of houses and of streets, and the exercise of control over the relation between a building and the topography of its site, the adjacent building and its place in the development of the town plan, lends itself to the development of centres of human activity that might well emanate from the high ideals which we in Canada credit ourselves with holding.

It is indeed very difficult to predict to-day the housing of to-morrow. Looking back through centuries one sees but little difference in the conception of what a hallowed place home may be made to mean. I think we all realize that privileges of environment do not necessarily lead to happiness except by way of contentment, yet it behoves us to take advantage of the hour if the social unrest of the day is to be in a measure appeased. Mr. F. Haverfield in a review of *Ancient Town Planning*, makes the following interesting observation:

"The art of laying out towns with due care for the health and comfort of the inhabitants, for industrial and commercial efficiency, and for reasonable beauty of buildings is an art of intermittent activity. It belongs to special ages and circumstances. For its full unfolding two conditions are needed. The age must be one in which, whether through growth or through movements of population, towns are being freely founded or freely enlarged, and almost as a matter of course, attention is drawn to methods of arranging and laying out such towns. And secondly, the builders of these towns must have wit enough to care for the well-being of common men and the due arrangement of ordinary dwellings. In many lands and centuries—in ages where civilization has been tinged by an undercurrent of barbarism—one or both of these conditions have been absent. In Asia, during much of its history, in early Greece, in Europe during the first half of the middle ages, towns have consisted of one or two dominant buildings, temple or church or castle, one or two processional avenues for worshippers at sacred festivals and a little adjacent chaos of tortuous lanes and squalid houses. Architects have devised beautiful buildings in such towns, but they have not touched the chaos or treated the whole inhabitant area as one unit".*

The day of activity is with us. Shall we direct it or suffer a repetition of the old haphazard planning of our streets?

Housing as a Public Health problem hardly exists to-day, provided our sanitary laws be enforced. Housing is now a great social problem.

The advent of cheap electric suburban transit, the rapid growth of population anticipated for Canada, the responsibility of the country toward the immigrant, the greater responsibility toward the native born citizen and the maintenance of the national traditions of which we are so proud, all stand as sentries or guards to prevent our slipping into the shameful development of the last century, which was dwarfed and cramped by the tradition that vested interests could only be interfered with on sanitary or public health grounds.

**Ancient Town Planning*. F. Haverfield, p. 11, 12.

I would like to impress upon you the fact that the time has come when we might do well to make our public health authorities consultative rather than administrative in as far as the housing question is concerned.

Is it vain to hope that shortly we will see Town Planning Commissions as much concerned over the appearance of a street of new houses and open spaces, as to-day they are concerned over the width of a roadway, and as capable of exercising control over the former, as to-day they are capable with respect to the latter.

It is certainly a serious reflection on the culture of our day that so little advantage is being taken of the architectural knowledge available and that speculative builders in their desire to net as large a return as possible and to avoid the cost of plans, turn to graduates from our technical high schools and to the younger members of our engineering profession for structural detail and succeed, whilst complying with by-law regulations, in erecting on our principle thoroughfares, barn-like structures developed along lines with which only the building trades are familiar.

In conclusion I would like to suggest that we in Canada might commence to meet the social problem of housing the working man and his family: (1) By increasing art education in our elementary schools, especially as it relates to colour and line. It is surprising how persuasive the younger generation can be in the matter of house furnishing. (2) By providing immediately for town planning instruction in our universities, for our young builders will require a broader grasp of the social question than architecture gives. (3) And should we desire to evidence in our streets the culture which we are all so desirous of introducing into our homes and in our social relationships, we must speedily conceive a satisfactory method of exercising architectural and town planning control over building operations, and must reconcile our speculative builders to a control more effective than the present regulations respecting mortar mixing and the laying of bricks.

Our Schools of Applied Science must be better endowed.

Think if you will, of the splendid services which ceramic schools might now render the country in such simple matters as improving the colours and cheapening the manufacture of local clay bricks.

Pasteurization of Milk Supply

Read before Annual Meeting, Canadian Public Health Association, Ottawa,
September 27-28, 1917.

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IN these days of huge sacrifice of human life, does it not appear to every thinking citizen, having at heart the highest interests of his country, that one of the most pressing duties of the hour is to preserve as many units as possible to make up for the great loss of the war. But where will our efforts bear the most fruitful results, if not in the pursuing of the "Save the Baby Campaign." In fact statistics bear out that the gravest wound through which so much of the blood of the nation is lost is the infantile mortality. Whatever we can do, therefore, to decrease the rate of this mortality, we must do it for the sake of our country, which will ultimately derive the benefits which will undoubtedly follow a campaign systematically and scientifically conducted.

What are therefore the causes of infantile mortality and what can be undertaken against them?

We know these causes to be numerous, but the most important ones are:

(1) The pre-natal influences (alcoholism, syphilis, tuberculosis, general debility of the poor mother from overwork, etc.).

(2) Gastro-enteritis, the causes of which are: (a) the gradual decrease in breast feeding and the constant increase in a corresponding ratio of artificial feeding mostly with cow's milk; (b) un-hygienic feeding by overfeeding, irregularity of meals; (c) summer heat and unsanitary houses, which are considered by Professor Winslow, of New York, as being a cause as much important of diarrhoea, as of diseases of the respiratory tract; and (d) lastly the general hygiene of the baby, which bears so much that a nurse of Detroit has justly said: "To successfully combine milk with a baby, one must take as much care of the baby as of the milk."

The other causes which are related to infantile mortality are:

(3) Diseases of the respiratory tract.

(4) Contagious diseases.

(5) Tuberculosis.

But if we consider the mortality of infants under one year of age we must draw the conclusion that, after the deaths due to the pre-natal influences, the most important cause is gastro-enteritis.

My intention is not, in the limited time allotted to the reading of my paper to make a complete survey of all the means at our disposal to undertake a more or less successful war against the numerous causes which can influence the infantile mortality rate, but rather to consider briefly two factors which can go far in bringing about this most desired result. These two factors are the improvement of the milk supply by pasteurization and the education of the mothers by the municipal nurse.

This subject might seem to some of the scientists here present to be out of date, and I fully endorse the renowned medical officer of health of Toronto, when he says in his Report on Pasteurization, published in 1915: "I refer to the advisability or inadvisability of pasteurization with apologies to my colleagues, with whom the discussion of this problem is practically ancient history." But my excuse is the fact that up to the present time quite a number of important cities in this country are not yet adequately provided with this means of improving their milk supply or do not carry it as adequately as it could be.

Am I expected now to develop a thesis in favour of pasteurization? But a whole volume could be written to prove, with Dr. Chas. J. Hastings, that "proper pasteurization does not exert any deleterious influence upon the chemical or nutritive value of milk." Many arguments could be presented to conclude, with the Report of the Special Milk Board of the Massachusetts State Department of Health, published in 1916, that "the surest, most economical and quickest method that has ever yet been devised to bring about the end in view, namely, the perfect safeguarding of the milk supply, as regards bovine tuberculosis, is through the resort to the process of pasteurization. It is sufficient to make the definite, emphatic statement here, continues the report, that pasteurization, properly performed, will undoubtedly remove all danger of transmission of tuberculosis through milk. Proper pasteurization kills all the germs of communicable diseases of man that can possibly be transmitted through milk. Pasteurized milk is the only safe milk. No epidemic has ever been traced with certainty to pasteurized milk." We will all stand also for this statement of Parkes and Kenwood, the English authorities on Hygiene and Public Health: "Pasteurization is a valuable measure of protection against the recurrence of those milk-borne epidemics which have figured in the epidemiological records of this country; it is a useful means of reducing the grave risks of the infection of tuberculosis in milk; and the evidence is overwhelming that it reduces the suffering and mortality among infants who are artificially fed in summer months." Much could be said also in favour of the opinion

of Dr. M. J. Rosenau, who "recommends compulsory pasteurization of all milk not officially certified."

But my ambition is not so high as to explain to the members of this Congress the advantages and even the necessity of pasteurization. I will only confine myself to analyse the work carried along these lines in a few of the most important cities of this continent, the result of which will allow us to draw practical conclusions.

To obtain first hand information a questionnaire was addressed to sixty-two cities. Answers were received in the following proportions: To the first question, 34; to the second, 32; to the third, 34; to the fourth, 33; to the fifth, 33; to the sixth, 30; to the seventh, 23; to the eighth, 28.

1ST QUESTION.

The first thing of interest to know was the exact percentage of raw and pasteurized milk used in the following years: 1905, 1910, 1911, 1912, 1913, 1914, 1915, 1916. Following are the figures giving the average percentage for the years mentioned and the number of cities with pasteurization in each year.

Year.	Raw Milk. %	Pasteurized Milk. %	Number of cities.
1905	95.3	47.7	8
1910	85.45	14.55	17
1911	82.69	17.31	17
1912	77.50	22.50	20
1913	67.96	32.04	22
1914	62.85	37.15	24
1915	49.57	50.43	28
1916	29.69	70.31	34

These figures show very plainly the rapidly increasing proportion of pasteurized milk used.

The exact figures for each city, from which answers have been received, are the following:

	RAW MILK							
	1905	1910	1911	1912	1913	1914	1915	1916
New York.....	100	.....	.....	.....	40	.....	.....	nearly 0
Toronto.....	100	.....	.....	60	20	0.5	0.5	0.5
Spokane.....	93	40	40	40	35	30	20	15
Chicago.....	.....	.....	.....	.....	20	15	15	0
Minneapolis.....	.....	.....	.....	.....	.....	.....	.....	40
Los Angeles.....	.....	25	25	22.5	20	20	20	20
Detroit.....	100	99	99	97	95	90	0	0
Vancouver.....	100	90	85	85	50	40	25	10
Seattle.....	.....	.....	.....	.....	.....	33.3	30	25
Portland.....	.....	.....	.....	.....	.....	.....	.....	50
Montreal.....	.....	.....	.....	80.82	80.26	71.45	69.14	57.79
Winnipeg.....	100	60	50	45	35	40	45	50
Washington.....	100	95	80	65	50	35	20	15
Milwaukee.....	80	50	40	30	15	15	10	8

RAW MILK—Contd.

	1905	1910	1911	1912	1913	1914	1915	1916
St. Paul.....								40
Jersey City.....	100	100	100	100	100	100	5	5
Baltimore.....							44	35
Reading.....						75	65	50
Syracuse.....							75	62.5
St. Louis.....								20
New Haven.....					90			65
Columbus.....	65	55	50	45	40	35	30	28
Fall River.....	95	95	95	95	95	95	90	90
Dayton.....				50	45	40	35	25
Scranton.....	90	90	90	90	90	50	25	15
Bridgeport.....	100	90	90	85	85	75	75	(1917) 20
Rochester.....	100	90	90	85	85	80	75	75
New Bedford.....								
Albany.....							75	66
Atalanta.....								
Indianapolis.....	90	80	70	60	50	45	30	10
Ottawa.....	60	50	40	40	40	30	25	25
Buffalo.....	75	75	75	75	75	75	65	10.15
Boston.....		50.10	26.98	29.41	19.37	20.70	17.47	14.28
Average per year.....	95.3	85.45	82.69	77.50	67.96	62.85	49.57	29.69

PASTEURIZED MILK.

	1905	1910	1911	1912	1913	1914	1915	1916
New York.....	0	small portion			60			nearly 100
Toronto.....	0			40	80	99.5	99.5	99.5
Spokane.....	7	60	60	60	65	70	80	85
Chicago.....					80	85	85	100
Minneapolis.....								60
Los Angeles.....		75	75	77.5	80	80	80	80
Detroit.....	0	1	1	3	5	10	100	100
Vancouver.....	0	10	15	15	50	60	75	90
Seattle.....						66.6	70	75
Portland.....								50
Montreal.....				19.18	19.74	28.55	30.86	42.21
Winnipeg.....	0	40	50	55	65	60	55	50
Washington.....	0	5	20	35	50	65	80	85
Milwaukee.....	20	50	60	70	85	85	90	92
St. Paul.....								60
Jersey City.....	0	0	0	0	0	0	95	95
Baltimore.....							56	65
Reading.....						25	35	50
Syracuse.....							25	37.5
St. Louis.....								80
New Haven.....					10			35
Columbus.....	35	45	50	55	60	65	70	72
Fall River.....	5	5	5	5	5	5	10	10
Dayton.....				50	55	60	65	75
Scranton.....	10	10	10	10	10	50	75	85
Bridgeport.....	0	10	10	15	15	25	25	80
Rochester.....	0	10	10	15	15	20	25	25
New Bedford.....				a dozen peddlers.				
Albany.....							25	34
Atalanta.....								small part
Indianapolis.....	10	20	30	40	50	55	70	90
Ottawa.....	40	50	60	60	60	70	75	75
Buffalo.....	25	25	25	25	25	25	35	85-90
Boston.....		49.90	73.02	70.59	80.63	79.30	82.53	85.72
Average per year.....	4.7	14.55	17.31	22.50	32.04	37.15	50.43	70.31

ORDER OF CITIES IN PERCENTAGE OF PASTEURIZATION IN 1916.		ORDER OF CITIES IN AVERAGE PERCENTAGE OF PASTEURIZATION WITH NUMBER OF YEARS A FAIR PASTEURIZATION IS IN USE.		
Cities	%	Cities	%	No. of Years.
Chicago.....	100	Detroit.....	100	2
Detroit.....	100	Jersey City.....	95	2
New York.....	nearly 100	Chicago.....	87.5	5
Toronto.....	99.5	Toronto.....	83.7	5
Jersey City.....	95	St. Louis.....	80	1
Milwaukee.....	92	Los Angeles.....	78.2	7
Vancouver.....	90	Milwaukee.....	76	7
Indianapolis.....	90	Boston.....	74.52	7
Buffalo.....	85.90	Seattle.....	70.55	3
Boston.....	85.72	New York.....	70	4
Spokane.....	85	Vancouver.....	68.7	4
Washington.....	85	Spokane.....	68.5	7
Scranton.....	85	Scranton.....	66.6	3
Los Angeles.....	80	Ottawa.....	64.28	7
St. Louis.....	80	Dayton.....	61	5
Bridgeport.....	80	Baltimore.....	60.5	2
Seattle.....	75	Minneapolis.....	60	1
Dayton.....	75	Columbus.....	59.59	7
Ottawa.....	75	Indianapolis.....	55.8	6
Columbus.....	72	Washington.....	55.8	6
Baltimore.....	65	Winnipeg.....	53.57	7
Minneapolis.....	60	Portland.....	50	1
St. Paul.....	60	Bridgeport.....	43.3	3
Portland.....	50	Reading.....	36.66	3
Winnipeg.....	50	Buffalo.....	35.3	7
Reading.....	50	New Haven.....	35	1
Montreal.....	42.21	Syracuse.....	31.25	2
Syracuse.....	37.5	Albany.....	29.5	2
New Haven.....	35	Montreal.....	28.10	5
Albany.....	34	Rochester.....	23.3	3
Rochester.....	25	Fall River.....	6.4	7
Fall River.....	10			
Atlanta.....	small part			
New Bedford.....	a dozen pedlers			

ORDER OF CITIES HAVING USED PASTEURIZATION FOR THE SAME NUMBER OF YEARS.

I. Use of pasteurization for 7 years.

Los Angeles.....	78.2 %
Milwaukee.....	76
Boston.....	74.52
Spokane.....	68.5
Ottawa.....	64.28
Columbus.....	59.59
Winnipeg.....	53.57
Buffalo.....	35.5
Fall River.....	6.4

II. Use of pasteurization for 6 years.

Washington.....	55.8 %
Indianapolis.....	55.8

III. Use of pasteurization for 5 years.

Chicago.....	87.5 %
Toronto.....	83.7
Dayton.....	61
Montreal.....	28.10

IV. Use of pasteurization for 4 years.

New York.....	70 %
Vancouver.....	68.7

V. Use of pasteurization for 3 years.

Seattle.....	70.55%
Scranton.....	66.6
Bridgeport.....	43.3
Reading.....	36.66
Rochester.....	23.3

VI. Use of pasteurization for 2 years.

Detroit.....	100 %
Jersey City.....	95
Baltimore.....	60.5
Syracuse.....	31.25
Albany.....	29.5

VII. Use of pasteurization for 1 year.

St. Louis.....	80 %
Minneapolis.....	60
St. Paul.....	60
Portland.....	50
New Haven.....	35

All these data are important to know in order to appreciate the influence of the pasteurization of the milk on the reduction in infantile mortality.

2ND QUESTION.

All authorities agree that pasteurization should be made as soon as possible after the production of the milk. This desideratum is better fulfilled when pasteurization is carried out in the producing areas. But on the other hand we all know that the milk after its pasteurization must be kept cold up to the time of delivery and consumption. Is not this second precept better lived up to when pasteurization is made in the plants located in the cities? Because when pasteurization is made in the country, the pasteurized milk must be taken to the city and when refrigerator cars are not used in the summer the temperature of the milk is liable to increase. This is no doubt a difficulty which has to be overcome. It is interesting to know therefore the number of pasteurizing plants located in the producing areas and in the cities proper.

The answers to this question show that the average number and percentage of pasteurizing plants located in the producing areas and in the cities proper are the following:

IN THE PRODUCING AREA.		IN THE CITY PROPER.	
Number.	Percentage.	Number.	Percentage.
324	19.1	1367	80.9

This result shows that there are over four times more pasteurizing plants located in the cities than in the country.

The detailed report from each city is the following:

CITIES.	IN THE PRODUCING AREA.		IN THE CITY PROPER.	
	Number.	Percentage	Number.	Percentage
New York.....	50	10	450	90
Toronto.....	0	0	90	100
Spokane.....	1	14.285	6	85.715
Chicago.....	140	31.96	298	68.04
Minneapolis.....	2	11.11	16	88.89
Los Angeles.....	3	17.6	14	82.4
Detroit.....	2	3.84	50	96.16
Vancouver.....	2	10	18	90
Seattle.....	0	0	16	100
Montreal.....	0	0	11	100
Winnipeg.....	0	0	2	100
Washington.....	5	25	15	75
Milwaukee.....	0	0	33	100
St. Paul.....	0	0	5	100
Jersey City.....	48	94.1	3	5.9
Baltimore.....	0	0	37	100
Reading.....	1	12.5	7	87.5
Hamilton.....	0	0	12	100
Syracuse.....	7	63.6	4	36.4
St. Louis.....	0	0	38	100
New Haven.....	0	0	10	100
Columbus.....	6	25	18	75
Fall River.....	0	0	6	100
Dayton.....	0	0	6	100
Scranton.....	5	41.6	7	58.4
Bridgeport.....	2	40	3	60
Rochester.....	3	15	17	85
Albany.....	1	25	3	75
Boston.....	6	11.5	46	88.5
Indianapolis.....	30	60	20	40
Ottawa.....	0	0	3	100
Buffalo.....	10	8.8	103	91.2
Total.....	324	19.1	1367	80.9

3RD QUESTION.

Two methods can be used for pasteurizing milk: the flash and the holding.

The result of the enquiry with regard to the process adopted is the following:

Flash only.....	0
Flash and holding.....	9 (25.7 per cent.)
Holding only.....	26 (74.3 per cent.)

Total..... 35

In conformity therefore with the principles of science the tendency is more and more strongly in favour of the holding method, that is the rising of the temperature to 145° F., maintained during thirty minutes.

The detailed report is as follows:

CITIES.	FLASH.	HOLDING.
New York.....	At first done by flash	Since 5 or 6 years have insisted on the holding
Toronto.....		Yes
Spokane.....		Yes
Chicago.....		Yes
Minneapolis.....	Yes	Yes
Los Angeles.....		Yes
Detroit.....		Yes (only)
Vancouver.....	2 flash	18 holding (law requires holding)
Seattle.....		Yes (required by ordinance)
Portland.....		Majority utilize holding
Montreal.....	Yes	Yes
Winnipeg.....		Yes
Washington.....		Yes
Milwaukee.....	Yes	Yes
St. Paul.....		Yes
Jersey City.....		Yes
Baltimore.....	19 plants pasteurize 19% of milk	18 plants pasteurize 46% of milk
Reading.....		Yes
Hamilton.....		Yes
Syracuse.....		Yes
St. Louis.....		Yes
New Haven.....	3	7
Columbus.....		Yes
Fall River.....		Yes
Dayton.....	3 years ago all used flash, now only 1	5
Scranton.....		Yes
Bridgeport.....	Yes	Yes (preferred)
Rochester.....		Yes
New Bedford.....		Yes
Albany.....		Yes
Boston.....	Yes	Principally
Indianapolis.....		Yes
Ottawa.....		Yes
Buffalo.....		Yes

4TH QUESTION.

The Massachusetts Report, already alluded to, contains the following statements: "The present uncontrolled method of pasteurization does not furnish a satisfactory safeguard to the public. To make certain of the adequacy of the processes of sterilization or pasteurization, the responsibility therefore should rest upon public health officials. Pasteurization should not be allowed to be used to conceal an inferior quality of milk. The commercial pasteurization of milk should be under official supervision for the following reasons: (1) To prevent the pasteurization of milk high in bacteria. (2) To prevent the treating of milk to a temperature sufficient to change its chemical composition. (3) To see that the pasteurization is carried out in such a manner that the pathogenic bacteria are killed. (4) To see that the milk is not reinfected after pasteurization."

It was therefore interesting to know the extent to which this official supervision is actually carried out. The answer is the following:

Pasteurization made —by dealers, 31 cities (96.8%).
—by health authorities, 1 city (3.2%).

Pasteurizing plants —Owned by city, 0.
—Controlled by city, 10.

This result shows that the dealers have understood their interests in using pasteurization of milk more and more extensively on account of the increased keeping qualities of pasteurized milk. Do the health authorities generally sufficiently realize their duties in this respect? Nevertheless we can conclude that it would be better to have the work done or at least constantly supervised by the representatives of the health department to be sure that pasteurization is properly done and to safeguard the pasteurized milk against all possible causes of recontamination. Otherwise how can we expect this scientific process to effectively reduce our infantile mortality?

The detailed answer to this question is as follows:

CITIES.	PASTEURIZATION MADE.		PASTEURIZATION PLANTS.	
	By Dealers.	By Health Author.	Owned by City.	Controlled by City.
New York.....	Yes	.....	.....	Yes
Toronto.....	Yes	.....	.....	.....
Chicago.....	Yes	.....	.....	Yes
Minneapolis.....	Yes	.....	.....	Yes (by inspection and ordinance)
Los Angeles.....	Yes	.....	.....	.....
Detroit.....	.....	Yes	.....	Yes
Vancouver.....	Yes	.....	.....	Yes
Seattle.....	Yes	.....	.....	.....
Portland.....	Not stated	Not stated	.....	Yes (by inspection)
Montreal.....	Yes	.....	.....	.....
Winnipeg.....	Yes	.....	.....	.....
Washington.....	Yes	.....	.....	.....
Milwaukee.....	Yes	.....	.....	.....
St. Paul.....	Yes	.....	.....	.....
Jersey City.....	Yes	.....	.....	.....
Baltimore.....	Yes	.....	.....	.....
Reading.....	Yes	.....	.....	.....
Hamilton.....	Yes	.....	.....	.....
Syracuse.....	Yes	.....	.....	Yes
St. Louis.....	Yes	.....	.....	.....
New Haven.....	Yes	.....	.....	.....
Columbus.....	Yes	.....	.....	.....
Fall River.....	Yes	.....	.....	.....
Dayton.....	Yes	.....	.....	Yes
Scranton.....	Yes	.....	.....	Yes
Bridgeport.....	Yes	.....	.....	Yes
Rochester.....	Yes	.....	.....	.....
New Bedford.....	Yes	.....	.....	.....
Albany.....	Yes	.....	.....	.....
Boston.....	Yes	.....	.....	.....
Indianapolis.....	Yes	.....	.....	.....
Ottawa.....	Yes	.....	.....	.....
Buffalo.....	Yes	.....	.....	.....
Total.....	31	1	0	10
Percentage.....	96.8	3.2	0	32.2

5TH QUESTION.

The question of the age of the milk is a very important one, because of the gradually increasing number of toxin forming bacteria developing rapidly in the milk under favourable conditions of temperature. The sooner therefore the milk is correctly pasteurized and kept the lower will be the bacterial count and the less chance there is for the milk to contain toxins which are not destroyed by heat.

The answers to this question show that on the average milk is pasteurized 15 hours after its production, and that the pasteurized milk is 31 hours old when delivered to the consumer.

The conditions would be improved, no doubt, if it was possible to reduce the time between the milking and the pasteurization.

The answers given by the different cities to this question are as follows:

CITIES.	AGE OF MILK.	
	WHEN PASTEURIZED	WHEN DELIVERED.
New York.....	In plants located in the city, it is 12 to 24 hours older than if it is pasteurized in the country.	
Toronto.....	20	44
Spokane.....	18	36
Chicago.....	18	48
Minneapolis.....	24	36
Los Angeles.....	6 to 12	12 to 24
Detroit.....	12	24
Vancouver.....	24	30
Seattle.....	5 to 20	18
Portland.....	2 to 14	12 to 18
Montreal.....	24 to 36	48 to 60
Winnipeg.....	15	33
Washington.....	12	30
Milwaukee.....	12 to 15	24 to 27
St. Paul.....	15	36
Jersey City.....	1 to 12	36
Baltimore.....	5 and 14	23 and 32
Reading.....	4 and 16	24
Hamilton.....	24	48
Syracuse.....	14	48
St. Louis.....	24	48
New Haven.....	15	24
Columbus.....	6 to 15	20
Fall River.....	12	24
Dayton.....	10	30 to 36
Scranton.....	20	25
Bridgeport.....	12 to 24	36
Rochester.....	20	36
Albany.....	15	24
Boston.....	36	48
Indianapolis.....	16	24 to 48
Ottawa.....	12 to 24	12
Buffalo.....	12	20 to 30
	Mean time 15 hours	Mean time 31 hours

6TH QUESTION.

The bacterial count is always considered to be the best criterium of the purity of the milk, showing therefore that the laboratory is the best means of knowing the quality of the milk and of controlling the precautions taken in its production, handling and storing.

The bacterial count can be controlled by inspection, grading and pasteurization. All these methods are good and must be maintained, but experience proves that by far the best method of lowering the bacterial content of milk is through pasteurization. The answers given to this question afford another proof of this assertion. The result is the following:

AVERAGE BACTERIAL COUNT.

RAW MILK AT DELIVERY.		PASTEURIZED MILK.		
Certified.	Not certified.	Before pasteurization.	After pasteurization.	When delivered.
11,946	203,500	4,541,000	39,727	82,644

This result allows us to draw the following conclusions:

(1) A reduction of 99.13% in the bacterial count of the milk has been obtained as a result of pasteurization.

(2) The bacterial content of the milk at delivery has been reduced by 98.19% as a result of pasteurization.

(3) A reduction in the bacterial count of 59.34% over the delivery of not certified raw milk has been obtained as a result of pasteurization.

The answers of the individual cities are the following:

CITIES.	BACTERIAL COUNT.	
	RAW MILK AT DELIVERY.	
	Certified.	Not certified.
New York.....	10,000	25,000-60,000
Toronto.....	7,500	none
Spokane.....		4,000
Minneapolis.....	6,934	200,000
Los Angeles.....	Under 10,000	Under 100,000
Detroit.....	3,000	800,000
Vancouver.....	None	109,000
Seattle.....	3,000	34,000
Montreal.....		1,000,000
Winnipeg.....	10,000	80,000
Washington.....	4,000	50,000
Milwaukee.....	8,000	500,000
St. Paul.....	10,000	
Jersey City.....	10,000	Practically 10,000
Reading.....		150,000
Hamilton.....	None	None
Syracuse.....	Below 10,000	About 80,000
New Haven.....	Depend upon direct microscopic examination of sediment	

CITIES.	BACTERIAL COUNT.	
	RAW MILK AT DELIVERY.	
	Certified.	Not certified.
Columbus.....	7,000	68,000
Fall River.....	None	200,000
Dayton.....	3,000	600,000
Scranton.....	None	20,000-250,000
Bridgeport.....	50,000	500,000
Rochester.....	Under 10,000	.....
Boston.....	Less than 10,000	.....
Atlanta.....	.....	36% less 10,000
Indianapolis.....	50,000	86% less than 100,000
Ottawa.....	6,500	55,000
Buffalo.....	10,000 and less	226,000
Average.....	11,946	60,000

TOWN.	PASTEURIZED MILK.		
	Before pasteurization.	After pasteurization.	When delivered.
New York.....	Country 5,000-300,000 City 100,000-1,500,000	.....	A 5,000-30,000 B 10,000-100,000
Toronto.....	1,000,000	50,000	250,000
Spokane.....	.....	4,000	4,000
Minneapolis.....	3,000,000	.....	52,500
Los Angeles.....	A under 200,000 B under 1,000,000	A under 10,000 B under 50,000	Same
Detroit.....	800,000	75,000	100,000
Vancouver.....	1,350,000	100,000	Slight increase
Seattle.....	110,000	27,000	27,000
Montreal.....	.....	100,000	100,000
Winnipeg.....	500,000	10,000	15,000
Washington.....	.....	.....	25,000
Milwaukee.....	1,000,000	10,000	175,000
St. Paul.....	.....	.....	.....
Jersey City.....	.....	.....	.....
Reading.....	200,000	.....	50,000
Hamilton.....	100,000	30,000	30,000
Syracuse.....	80,000	10,000	20,000
New Haven.....	Depend upon direct microscopic examination of sediment	.....	.....
Columbus.....	500,000	.....	64,000
Fall River.....	200,000	5,000	20,000
Dayton.....	500,000	2,000-150,000	269,000
Scranton.....	20,000-250,000	2,000-65,000	Very little variation
Bridgeport.....	500,000	About 100,000	150,000
Rochester.....	.....	40,000	.....
Boston.....	.....	.....	Less than 500,000
Atlanta.....	.....	.....	.....
Indianapolis.....	250,000-100,000,000	4,000-10,000	5,000-15,000
Ottawa.....	.....	.....	19,600
Buffalo.....	60,000	20,000 or less	30,000 or less
Average.....	4,541,000	39,727	82,644

7TH QUESTION.

The average decrease in the infantile mortality noticed in the twelve cities using pasteurization for at least a part of their milk supply and from which figures have been obtained is 29.82 per thousand births.

Following are the answers received:

CITIES.	AVERAGE INFANTILE MORTALITY RATE.		
	Before Pasteurization.	Since Pasteurization.	Decrease.
New York.....	140.9	96.9	44.0
Spokane.....	14.88	6.9	7.98
Los Angeles.....	(1910) 94	(1915) 67	27
Detroit.....	142.4	103.7	38.7
Seattle.....	16.5 (under 2 years)	4.8 (under 2 years)	11.7
Portland.....	(1909) 32.6 (under 2 years)	(1916) 3.0 (under 2 years)	29.6
Montreal.....	251.9	200.4	51.5
Washington.....	156.25	105.54	50.71
Milwaukee.....	112	99	13
Syracuse.....	134.5	98	36.5
St. Louis.....	101.45	85.5	15.95
Columbus.....		(1916) 91.88	
Dayton.....		104.25	
Rochester.....		86	
Boston.....	(1905) 136.6	(1916) 105.3	31.3
Average decrease.....			29.82

RATE OF CITIES *re* DECREASE IN INFANTILE MORTALITY.

Cities.	Decrease	Methods used.
Montreal.....	51.5	Pasteurization, 28.10% since 5 years and 8 nurses with milk depots
Washington....	50.71	Pasteurization only, 55.8% since 6 years
New York.....	44	Pasteurization, 70% since 4 years and about 150 nurses
Detroit.....	37.7	Pasteurization, 100% since 2 years and 10 nurses since 7 years
Syracuse.....	36.5	Pasteurization, 31.25% since 2 years and 10 nurses since 3 years
Boston.....	31.3	Pasteurization, 74.52% since 7 years and 22 nurses since 6 years
Los Angeles....	27	Pasteurization only, 78.2% since 7 years.
Milwaukee....	13	Pasteurization only, 80% since 1 year
St. Louis.....	15.95	Pasteurization only, 76% since 7 years and 14 nurses since 6 years

8TH QUESTION.

The influence of the visiting nurse and the necessity of educating the mothers in their homes is being now admitted so universally as one of the most important factors in the reduction of infantile mortality that this review would not be complete without reference to the actual organization of the cities in this respect.

The average decrease in the infantile mortality in the three cities provided with municipal nurses in connection with babies' welfare work and from which figures were obtained is 28.325 per thousand births.

The result is as follows:

CITIES.	AVERAGE INFANTILE MORTALITY RATE.		
	Before Nurses are employed.	Since Nurses are employed.	Decrease
Rochester.....		86	
Columbus.....		(1916) 91.88	
Detroit.....		132.8	
Boston.....	(1905) 136.6	(1916) 105.3	31.3
Syracuse.....	145	106.6	38.4
Dayton.....	119.225	93.95	15.275
Average decrease.....			28.325

The detailed answers to this question are as follows—

Cities.	Number of Nurses	Home Visiting.	Number of years.
New York.....	About 150	Yes.	
Toronto.....	50	yes.	5
Spokane.....	0		
Chicago.....	4	Yes.	3
Minneapolis.....	2	Yes.	
Detroit.....	10	Yes.	7
Vancouver.....	1	No.	
Seattle.....	?	Yes.	
Montreal.....	8	Some do summer	
Winnipeg.....	6	Yes.	5
Washington.....	0		
Milwaukee.....	14	Yes.	6
St. Paul.....	1	No.	
Jersey City.....	7	Yes.	2
Reading.....	?	Yes.	
Hamilton.....	Carried on by Babes' Dispensaries Guild.		
Syracuse.....	10	Yes.	3
New Haven.....	7	Yes, in summer.	4
Columbus.....	Number not stated	Yes.	12
Fall River.....	14	Yes.	3
Dayton.....	17	Yes.	3
Bridgeport.....	8 in summer.	Yes.	3
Rochester.....	4 in winter 6 in summer	Yes.	17
New Bedford.....	2	Yes.	
Boston.....	22	Yes.	6
Indianapolis.....	10	Yes.	
Ottawa.....	4 in winter 6 in summer	Yes.	
Buffalo.....	52	Yes.	3

Order of cities *re* number of years nurses
are employed.

Cities.	Number of years.
Rochester.....	17
Columbus.....	12
Detroit.....	7
Boston.....	6
Toronto.....	5
Winnipeg.....	5
New Haven.....	4
Chicago.....	3
Syracuse.....	3
Fall River.....	3
Dayton.....	3
Bridgeport.....	3
Buffalo.....	3
Jersey City.....	2

Order of cities *re* number of nurses per
population.

Cities.	One nurse per.
Dayton.....	7,484
Toronto.....	7,530
Buffalo.....	9,010
Fall River.....	9,169
Rochester.....	14,245
Ottawa.....	14,510
Bridgeport.....	15,197
Syracuse.....	15,562
New Haven.....	21,383
Winnipeg.....	22,671
Indianapolis.....	27,170
Milwaukee.....	31,181
Boston.....	34,385
New York.....	37,352
Jersey City.....	43,763
Detroit.....	57,178
Montreal.....	58,816
New Bedford.....	59,079
Minneapolis.....	181,727
St. Paul.....	247,232
Chicago.....	624,430

Cities having pasteurization only.

Cities.	Mortality in 1916.	Decrease.
Los Angeles....	67	27
Washington....	105.54	50.71
St. Louis.....	89	15.95
Average.....	87.18	31.22

Cities having pasteurization and nurses.

Cities.	Mortality. in 1916.	Decrease.
New York.....	93.1	44
Detroit.....	112.8	38.7
Montreal.....	182.6	51.5
Milwaukee....	99	13
Syracuse.....	98	36.5
Columbus.....	91.88	.....
Dayton.....	98.40	.....
Rochester.....	86	.....
Boston.....	105.3	37.3
Average.....	107.45	35.8

RECAPITULATION.

CITIES.	MORTALITY.	PASTEURIZATION.		NURSES.		
		Percentage (1916)	No. of years.	No. of years.	Total number	One nurse per popul'n.
Los Angeles.....	67. (1915)	80.	7	.....	.....	.....
Rochester.....	86.	25.	3	17	12 in winter 18 in summer	14,245
St. Louis.....	89. (1916)	80.	1	.....	.....	.....
Columbus.....	91.88 (1916)	72.	7	3	10	.....
New York.....	93.1 (1916)	Nearly 100	4	.....	About 150	37,352
Syracuse.....	98. (1916)	37.5	2	3	10	15,562
Dayton.....	98.40 (1916)	75.	5	3	17	7,484
Milwaukee.....	99.	92.	7	6	14	31,181
Boston.....	105.3 (1916)	85.72	7	6	22	34,385
Washington.....	105.54 (1916)	85.	6	.....	0	.....
Winnipeg.....	106.	50.	7	5	6	22,671
Detroit.....	112.8 (1916)	100.	2	7	10	57,178
Montreal.....	182.6 (1915)	42.21	5	.....	8	58,810

CONCLUSION.

Many factors work up in the reduction of infantile mortality. The most important of these factors are the pasteurization of milk supply and the education of the mothers through the home visits of the municipal nurses.

When nurses only are employed, the infantile mortality rate has been reduced by 28.325

When pasteurization only is used, the infantile mortality rate has been reduced by 31.22.

When both nurses and pasteurization are utilized, the infantile mortality rate has been reduced by 35.8.

Therefore we can conclude with the Massachusetts Report: "Combine the system of education through the visiting nurse with a pure milk supply and we have the framework of our present-day methods in the attempt to reduce our infant mortality rate."

I have the honour to move that The Canadian Public Health Association, realizing the importance of the visiting nurse and of the pasteurization of the milk supply in the war against infantile mortality, strongly recommends these two measures to all the cities of the whole Dominion.

That the present resolution be addressed to the bodies mentioned.

Control of Venereal Disease

*Read at Eighteenth New York State Conference of Charities and Corrections,
Binghamton, November 13th, 14th, 15th, 1917.*

BY EDWARD H. MARSH, M.D.

Sanitary Supervisor, New York State Department of Health.

THE figures of the U.S. Public Health Service show that there occur annually in the United States two and one-half million cases of venereal disease—more than twenty per cent. of the cases treated by that Federal Department are venereal. The Surgeon General's office of the U.S. Army shows that the ratio of venereal diseases among civilians of military age (twenty-one to thirty-one) is 265 per thousand. This means that there are approximately 100,000 cases in N.Y. State outside of the City of New York in men between the ages of eighteen and thirty-five. Keeping in mind these figures one realizes the importance of venereal disease from a standpoint of public health, and one sees also the enormity of the task which is before us.

In organizing plans for the control of communicable diseases there are certain logical steps which must be taken, more or less in sequence. The first is the furnishing of laboratory facilities for diagnosis and making such facilities easy of access; the second is the education of the medical profession to use these facilities. The extent of accomplishment which has been made along these lines may be appreciated by the following.

The facilities for Wassermann Reaction examinations in the laboratory of the State Department of Health were completed October, 1914, and during the next three months 15 examinations were made. In 1915 nearly 6,000 specimens were examined and in 1916 over 10,000 specimens were received and more than 20,000 tests were made. During the present year the work has increased from month to month until during the past few months about 3,000 such examinations have been made each month. During the year 1915 only 15 gonococcus fixation tests were made in the entire year, while in 1916 there were 3,209 such tests made. The third step includes the education of the public in the nature of the disease and methods of prevention, and further education of the physician as to proper methods of treatment; and the fourth and final step is the treatment of the cases.

Through the efforts of the N.Y. State Department of Health, the Legislature has this year passed amendments to existing laws, which are as follows:

An amendment to the Domestic Relations Law in effect May 16th, 1917, which provides that no marriage license may be issued until the applicant shall have subscribed to the following statement: "I have not to my knowledge been infected with any venereal disease, or if I have been so infected within five years I have had a laboratory test which shows that I am now free from infection from any such disease".

An addition to the Penal Law which reads as follows: "Advertisements relating to certain diseases prohibited. Whoever publishes, delivers or distributes or causes to be published, delivered or distributed in any manner whatsoever an advertisement concerning a venereal disease, lost manhood, lost vitality, impotency, sexual weakness, seminal emissions, varicocele, self-abuse or excessive sexual indulgence and calling attention to a medicine, article or preparation that may be used therefor or to a person or persons from whom or an office or place at which information, treatment or advice relating to such disease, infirmity, habit or condition may be obtained, is guilty of a misdemeanor and upon conviction thereof shall be punished by imprisonment for not more than six months, or by a fine of not less than fifty dollars nor more than five hundred dollars, or by both such fine and imprisonment. This section, however, shall not apply to didactic or scientific treatises which do not advertise or call attention to any person or persons from whom or any office or place at which information, treatment, or advice may be obtained, nor shall it apply to advertisements or notices issued by an incorporated hospital or licensed dispensary or by a municipal board or department of health or by the Department of Health of the State of New York".

In addition the Public Health Council has seen fit to amend the Sanitary Code to include syphilis, gonorrhoea and chancroid among the communicable diseases. This amendment is as follows:

"Regulation 29-a. Chancroid, gonorrhoea and syphilis. Chancroid, gonorrhoea and syphilis are hereby declared to be infectious diseases highly dangerous to the public health.

"It shall be the duty of every physician, when first attending a person affected with chancroid, gonorrhoea or syphilis to furnish said person with a circular of information issued or approved by the State Commissioner of Health and to instruct such person as to the precautions to be taken in order to prevent the communication of the disease to others."

It may be thought by some that the amendment to the Domestic Relations Law read above is useless, but it is believed that it has a distinct educational value. Men and women about to marry will be awakened to the fact that venereal diseases exist; furthermore, the value

of laboratory examination as the method, par excellence, in the determination of cures of venereal disease is shown.

A committee has been appointed in the State Department of Health which shall take up the control of venereal diseases. This committee consists of four members of the Departmental Staff with two additional members in advisory capacity in social hygiene work.

The proper control of venereal diseases is distinctly a public health problem and must be considered in that light. Venereal diseases must be controlled in the same way as diphtheria, typhoid fever and other communicable diseases. The great difference from the point of view of the public between venereal diseases and other communicable diseases is that individuals have more or less fear of the latter and therefore avoid exposure, while exposure to the former is entirely a volitional act. This fact makes our task many times more difficult. If an epidemic of diphtheria appears in our midst it is controlled by isolation of cases and carriers, by treatment of cases to lessen their infectivity and by education of the public in methods of avoiding exposure, etc. The venereal problem should be treated in the same manner, isolation, treatment and education.

The amendment to the Sanitary Code as read above gives the Department of Health the power to isolate dangerous cases and carriers of venereal diseases. Every case must be isolated to the extent that others shall not be exposed to the disease, but the vicious and dangerous case may now be lawfully confined in an institution until such time as he may no longer be a menace to the public health of the community. It is not required by the Sanitary Code that all cases of venereal diseases be reported to the Health Officer, but the physician has in his hands a powerful weapon with which to induce his patient to remain under observation until cured. If the patient does not obey the instructions given to him, he may be reported to the Health Officer who may take such measures as may be necessary to protect the health of the community.

Each case of venereal disease is a potential menace to the health of the public until cured. It therefore becomes the duty of the State to see that facilities exist for the treatment of all persons afflicted with venereal disease. In order that proper treatment may be within the reach of all, it is highly desirable that more hospitals and dispensaries for the treatment of venereal diseases be established. At the present time only 19 hospitals in the State outside of New York City take free syphilitic patients of both sexes, and in only 9 of these institutions is salvarsan furnished freely. There are only 10 dispensaries in the same localities which treat venereal diseases. The methods and equipment of these institutions are in many respects poor and should be improved.

The State Department of Health purposes adopting certain standards of method and equipment for institutions treating venereal diseases, and such institutions will be brought up to these standards as far as possible. In the larger cities we hope to see the local boards of health establish venereal clinics for advice and treatment of patients who cannot pay for the same. Such clinics have already been put in operation in some of the cities of the State. In those communities where this is not feasible the work will be done by the local officials. If sufficient appropriations are available, the State Department of Health purposes making it possible for the treatment to be within the reach of all. Salvarsan or its substitutes will be furnished to approved institutions and to health officers for administration to indigent patients. At convenient points throughout the State means for diagnosis by dark field illumination are to be established, so that treatment can be instituted when it is known to be of the greatest benefit.

Educational efforts must be directed toward both physicians and the public. Physicians must be taught that only by laboratory methods can the cure of venereal diseases be established; they must be kept informed of up-to-date methods of treatment, and lectures and demonstrations will be given from time to time throughout the State in this endeavour. Furthermore, the physician will be kept informed of institutions where proper treatment is available to the patient who cannot pay for it.

The public must be taught that venereal diseases are an individual as well as a public danger; that cure of such diseases is not an easy matter; and that only by repeated laboratory examination can proof of cure be established. This instruction is to be given by means of leaflets to be given to diseased persons by their physicians, by pamphlets which shall be distributed to the general public by health officers, physicians, nurses and officials of public institutions. Local and district meetings for both men and women will be held, and lectures will be given in factories, department stores and office buildings. Booklets on venereal disease and sex hygiene will be placed in barber shops, billiard rooms, and Y.M.C.A. reading rooms. Exhibits are to be held, permanent and travelling. Permanent notices will be placed in railroad stations, hotels and comfort stations, calling attention to the advisory features of the State Department of Health and inviting correspondence with that Department. Newspaper notices will serve in a similar capacity; articles will be published from time to time in the various newspapers throughout the State and at the present time a series of six articles has been sent in boiler plate to over four hundred papers.

Like other communicable diseases the control must be attained through epidemiological study of the cases which occur. Similarly to

typhoid fever, where only a very small per cent. of the total number of carriers are responsible for the greatest damage, it has been found that a small number of vicious cases of venereal disease is responsible for the largest number of new cases. These carriers must be sought out, isolated and treated until they can no longer communicate the disease to others. It therefore becomes necessary to determine the source of infection of individual cases insofar as possible in order to know who these carriers are.

The subject cannot be dismissed without mentioning the importance of "follow-up" work among the diseased individuals. This is a most necessary function of any institution treating venereal disease. Patients will neglect treatment just as soon as they believe themselves to be well, and it is only by most persistent efforts by the use of the mail and at times by personal visits of a nurse that therapeutic efforts can be made successful. Under the power granted by the amendment to the Sanitary Code this work may be simplified, but continued effort along these lines is of the greatest value.

The social service worker will also play a large part in the efforts of the State Department of Health to control venereal diseases. Even to-day we find in our correctional institutions young girls, confined for slight offences, such as running away from home, kept in contact with hardened, vicious prostitutes. The harm that only a few hours of such association may accomplish is enormous. An effort must be made to reclaim prostitutes who have been isolated and cured of their diseases.

In conclusion I can only emphasize the importance of this work from a public health standpoint. In the armies of Europe to-day more men are invalidated by venereal diseases than by any other disease, and our own army for years has had the highest admission rate from venereal disease of any army known. Furthermore, the ratio of venereal disease among civilian men of military age in the United States is over three times as high as that of the regular army. Only by the combined efforts of all agencies, using all known methods of control can we hope to cope with the situation as it confronts us to-day.

“A Pull all together”

VOLUNTARY Co-ordination of Toronto's Social Service agencies seems a possibility in the near future. What may prove to be a most notable event in local history was the coming together in the City Hall on Thursday, December 27th, of sixty odd delegates appointed by half as many organizations, to consider the present possibility of a broad democratic co-ordination of social serving agencies. Never has any city shown itself to be more generous toward its poor, its unfortunates, its helpless ones, its little children than has Toronto. And so through many years have come together group after group of big-hearted people, who saw a need and were impelled to fulfill it. Within denominational church circles, in various fraternities, relief agencies were established, homes and hospitals for dependent or aged persons, and little children were established. The fraternal orders and labour unions found considerable relief work to do among their own members and their families. The city granted money yearly to some of these agencies, realizing that the service rendered was the concern of the entire community. In recent years the Department of Public Health established in addition to its sanitation work, a very thorough nursing system, to follow up the birth registrations, and maintain the well being of the infants. The Board of Education maintained a medical inspection and direction for school children with dental clinics and quarantine reporting. This service has been amalgamated with that of the Infant Welfare under the Department of Health. The various hospitals have developed a certain technique in their social service work, and numerous large manufacturing concerns have the good offices been served by Industrial Secretaries of the Y.W. and Y.M.C.A's, and have eventually established their own Welfare Departments.

All these agencies gradually evolve system in determining needs, investigating living conditions, recording treatment and history of cases, and discover that their work impinges upon and, at least in investigations, overlaps the work of other agencies. The persons who do the actual work find that working alone, each interest apart from the other, is disastrously wasteful of money and effort.

The Infant Welfare nurse finds that the reason the baby is delicate is because it is not breast-fed. And baby is not breast-fed because the mother is tuberculous. The school nurse complains that the two little boys are very irregular in attendance at school, having frequent illnesses, coughing a great deal. Baby, mother, boys cannot be radically

benefitted so long as they live in a damp, ill-ventilated house in the near-slum. And here the housing problem cannot be solved entirely by the sanitary inspectors. For if a dry airy house be available in a clean and sunny locality the family cannot afford the higher rent. The husband, so his employer or his union delegate explains, is only an unskilled workman, and cannot earn enough to attempt to a higher standard of living. When the oldest boy can once get to work they can afford more. But no says the Public School Principal, that lad must have time to get a good start, in the grades, then a year or two at Technical School. He must master a really good trade. Otherwise he will fall into the same plight as his father and so complete the vicious circle. But if the boy have this better opportunity the family must have a continuous help for a time, till the tuberculous mother can be restored. But that's charity (Word Taboo). We may call it charity or human economy or public welfare or what you will, the need or aid is there. Suppose mother and baby can go to a good sanitarium on city orders, and the two little coughing children have care at a preventorium, also at public expense, and the school boy be looked after temporarily at an Orphanage, or Boys Home, board being paid by the father. Suppose the nearby settlement or socialized church keeps in sympathetic touch with all the family. .

Its Men's Club furnishes the opportunity father needs for cheap and harmless recreation, among other sound family, and men, and the Minister or Men's Leader helps him plan constructively for the time when his wife shall come home, and the brood be brought together again. Through a Building and Loan Association he begins to save money toward a home of their own some day. He is introduced during this time of empty evenings to the chance through Night School to increase his knowledge and consequent earning capacity. The lawyer leader of the Club offers father a chance to learn to run his chicken farm on shares and eventually there opens up a semi-rural life which furnishes a good income and the chance for health for the entire family. What about it? Well, such an understanding of a family's needs and such a successful treatment covering a long period could not be arrived at by any one of the dozen interested agencies alone. There is need for pooling all available information about the family in some centre, not open to the general public, not subject to neighbourhood gossip, but available to those who will make judicious use of it. And the interested agencies should be able to consult with one another freely, and confidentially about the work, or better still, all do their bit of service through the one person who stands closest to the family. There is need of voluntary co-ordination among the social workers on this simple typical case. How much more so if it were an involved case.

To arrange a workable scheme of such co-ordination is the first task laid by the conference of December 27th, upon a committee of nine responsible persons appointed at the meeting. The Council of Neighbourhood Workers Associations, which called the meeting is the central body which co-ordinates the work of several district Neighbourhood Workers Associations which have been meeting for consultation on case problems and mutual help in meeting needs, for five years past. This central Council was established just after the opening of the war when the very seriousness of local needs showed the necessity of general plans for the city. The hope for an end to the war, some vision of the great social changes attendant upon it, and the need of direction and a medium of exchange in meeting the social tasks impells the present action toward the establishing of a more thorough and inclusive co-ordination of Social Service.

After such a co-ordination shall be brought about, the dimensions of our social plans may be measured, the reconstruction and the standardization of much philanthropic work be affected and the whole cost of the community's social may be budgeted and raised through a financial federation.

Even more important still, the radical work of determining and eradicating many social ills may be attempted with some degree of scientific accuracy when the trustworthy data on poverty inefficiency, ignorance, and disease are to be had. The task may one day be not that of "Organizing charity", but eradicating the causes which create the need for at least the common and general charities.

The Committee intrusted with this first task are: Rev. Peter Bryce, of the Council of N.W.A.; Mr. Brown, of the Trades and Labour Council; Mr. Roden, of the Canadian Manufacturers Association; Dr. Franklin Johnson, of the Social Service Department, Toronto University; Mr. Turley, of the Great War Veterans; Mrs. Huestis, of the Local Council of Women; A representative from House of Industry; Mr. Hewitt, of the Board of Trade; A Representative from Social Service Committee.



The Provincial Board of Health of Ontario

By JOHN W. S. McCULLOUGH, M.D., D.P.H., Chief Officer.

Under this heading the Provincial Board will contribute a few pages of material each month of particular interest to the Medical Officers of Health. These Officers are invited to acquaint the Board of any knotty problems which may arise in the course of their duties. These will be answered in due course.

The Board is about to send a circular to all Medical Officers of Health with a package of literature on the subject of *Venereal Diseases*. These leaflets the Medical Officers of Health are requested to distribute among the medical men in their respective municipalities, with a request that they will hand them to such patients as they deem advisable.

The Public needs education in Venereal Disease. Will you be good enough to do your share in this direction?

Diphtheria Antitoxin and other Biological Products.

During the past year the Board distributed nearly \$33,000 worth of Diphtheria Antitoxin and other biological products, not including Typhoid and Paratyphoid Vaccine, Pertussis Vaccine, and Preventive Treatment for Babies' Sore Eyes. The death-rate from Diphtheria in November, 1917, viz., 3.7%, is the lowest in the history of the Province.

The members of the profession are already making good use of the Board's provision for the free diagnosis of Venereal Disease at the three Laboratories (London, Kingston and Toronto). The facilities of these laboratories are at the service of the medical profession, and the Board hopes that the widest use will be made of them.

The Venereal Disease question is pressing itself on the attention of the public. On Monday, January 14th, occurs the first sitting of the Commission established by the Government for the purpose of enquiring into the care of the Feeble-Minded and to the extent of Venereal Disease. Every one desirous of presenting his or her views upon these subjects should attend the Sessions of the Commission.

The Ontario Health Officers' Association will hold its meeting during the first two days of the big Medical Week in Hamilton (May 27th to June 1st). The programme is now in course of preparation. Health Officers desirous of presenting papers are requested to communicate with the Secretary without delay.

Look for this page next month.

SMALL-POX VACCINE.

The other day the Board received a complaint from one of the Medical Officers of Health that the Small-pox Vaccine supplied free by the Board was not giving a proper percentage of "takes". Such a result is due to one of two causes.

- (1) The Vaccine is not of efficient quality.
- (2) The Vaccination is improperly carried out.

Experiments made under the direction of the Board, in the Military Camps and by the Health Departments of Toronto and New York have satisfied us that the efficiency of the Vaccine when shipped is all right. Frequently, however, we know it to have been kept *in the Doctor's bag, in an office drawer or on top of his desk exposed to light, and in over-heated rooms*. No vaccine will withstand such treatment and continue effective. If the plain directions on the wrapper "Keep in a cool dark place" are followed, the Vaccine will retain its efficiency up to the date marked on the package.

Many Vaccinations are improperly done. The abrasion should be very slight, merely sufficient to produce a moisture of the skin. If blood is drawn the vaccination will not, as a rule, be successful. Yet, how many physicians invariably draw blood in making the Vaccination. If the little operation is improperly done, how can first-class results be expected? In addition, the part must be allowed to dry thoroughly before the arm is covered.

Three lots of Vaccine were recently submitted to Dr. M. B. Whyte in charge of the Isolation Hospital, Toronto, with a request that he test their efficiency. The following is his report:

- 1st lot. All were successfully Vaccinated, fairly marked local reaction.
 - 2nd lot. Some of the patients had to lay off work.
 - 3rd lot. Vaccinations were successful with good local reactions.
 - 4th lot. Vaccinations were successful with good local reaction.
- Axillary glands swollen in two cases.

Let us repeat then. If your vaccinations fail in primary cases, enquire whether the Vaccine is kept in an ice-box, in the dark, if the Vaccination is properly done, and if it is allowed to dry well.

OUTDATING OF SERUMS AND ANTITOXINS.

The Board frequently has enquiries regarding the length of time its biological products are good. The following directions are worth remembering:

"The date of distribution of diphtheria antitoxin and tetanus antitoxin and meningitis serum is stamped on each package when sent out from the Laboratory.

If kept in the ice-box, diphtheria antitoxin and tetanus antitoxin probably do not deteriorate more than 15% in one year. They may therefore be used for that length of time, if this slight loss in strength is allowed for and the amount of serum used in a given case correspondingly increased to allow for the deterioration. After one year these serums may lose about 10%-15% more during the second year. If evaporation of the serum takes place and it becomes very thick, it is wise not to use it. This may happen if the serum is kept for many months.

Anti-meningitis serum, should only be used for nine months after the date stamped on the package, indicating when it was sent out from the Laboratory.

All of these serums, should of course, at all times be kept in the ice-box and in the dark. The same is also true in regard to small-pox Vaccine."

Book Reviews

A Dietary Computer, by AMY ELIZABETH POPE. G. P. PUTMAN'S SONS, New York and London. \$1.25.

This book should surely fill a long felt want not only to nurses and dietiticians but also to physicians as it contains a great deal of useful information which has been collected from various reliable authorities and put together in a very convenient form. The author quotes fully from Hutchison on Food and Dietetics and from the pamphlets and bulletins of the U.S. Department of Agriculture. The book is introduced by a short introduction into the nature and uses of food constituents, from here, one is given a concise description with a convenient list of food values relatively rich in special constituents. In addition to this there are a large number of tables showing the chemical composition and caloric value of common foods and beverages with their approximate cost. The only individuality about the book is a number of carefully prepared and analysed recipes which have been useful in the author's experience.

A. B.

Rural Planning and Development. A New Report on Problems of Vital and Current Interest in Canada.

The latest report of the Commission of Conservation deals with the important subject of the planning and development of rural districts and small towns in Canada. It has been prepared by Mr. Thomas Adams, Town Planning Adviser of the Commission, who has made a close study of the problems of rural development in this country during

the past three years, following twenty-five years experience in farming, land surveying and town planning in other countries.

The report deals comprehensively with the social conditions and tendencies in rural areas and the prevailing systems of land settlement and development. It indicates the rural problems requiring solution in order to secure the proper development and economic use of land for purpose of efficiency, health, convenience, and amenity. The great injury which land development in Canada suffers, from speculation, neglect of public health, and want of expert business administration of land settlement, is considered. Incidentally, the problem of returned soldiers is dealt with, and the connection between land development and such questions as taxation, unemployment, and high cost of living is clearly shown.

Having regard to the need for more attention being given to production in Canada; to the extent to which production is impaired by speculation in land, by neglect of public health, and by haphazard system of development; to the importance of increasing the supply of human skill and energy and of capital derived from production instead of by borrowing; the problems dealt with in this report are of vital and current interest to the people of this country.

There are five appendices by competent authorities, and the concluding chapter gives an outline of proposals and makes general recommendations to cover the conditions as presented.

Personal Hygiene and Physical Training for Women, by ANNA M. GALBRAITH, M.D. W. B. Saunders & Co., Philadelphia and London. \$2.25.

This practical and helpful book of educational value, will no doubt prove, not only interesting and profitable for gymnasium and school purposes, but also valuable for private reading, and study, to women of common sense.

The helpful directions and suggestions contained in this work are practical, clear, concise and comprehensive.

The exceptional variety of this needful information, the interesting and intellectual way, and the compact form in which it is compiled are some of the strong features of this book. There appears to be a personal touch as well.

The physical exercises suggested and ones illustrated for effective and corrective use are good, also beneficial but I think they could have been enlarged upon. For instance exercises given, showing progression—more advanced, stronger, and greater variety.

Chest-weight exercises are considered out-of-date in the modern gymnasium and in physical training methods for women. Better and more effective substitutes in Swedish exercises can be found.

Likely the illustrated dance positions would be criticized by members of the well known Normal Schools of Dancing in the United States. These positions have been somewhat changed in recent years.

I. G. C.

The School Nurse, by LINA ROGERS STRUTHERS, R.N. G. P. Putnam's & Son, New York and London. \$1.75.

This is the first book published dealing with the school nurse of Canada. It should have a wide welcome among all who are interested in this subject and prove of great assistance to communities considering the problem of medical inspection of schools. It is not an array of fine theories or indefinite generalities, but a clear statement of the building up of a system to gratifying attainments in two cities of such importance as New York and Toronto.

There is perhaps no one in a better position to present this book than Mrs. Struthers, her many years of pioneer work and supervision of a large staff of nurses makes her an authority on the subject.

It is difficult to select such and such a chapter as being more valuable than the others, but 3 on Organization, 5 Administration and 15 on the Card System of reports, point out most definitely the actual stone upon stone of the structure of medical inspection of schools. The Open Air work and Little Mothers classes will be interesting reading to those who have not yet seen that phase of the work.

The nurse who is considering school nursing will do well to read, mark, learn and inwardly digest chapter 14, *The School Nurse*, and even then take a final look before she leaps. The qualifications demanded are high. Mrs. Struthers has shown the School Nurse as the opportune pebble dropped into the ocean of the community needs, her influence and opportunities enlarging in ever widening circles.

The last chapter on the card system of reports is valuable. The various forms shown are the pick and choice of many systems and their working value has been well tested.

All through the book the wealth of careful, pertinent detail shows the writers complete grasp of her subject.

In its history of obstacles overcome, its medical information and its ethics it may well be taken as a valuable text-book on school nursing.

M. E. B.

Editorials

A Federal Department of Public Health

SINCE the only question in connection with the establishment of a Federal Department of Public Health is when it shall be established, it is obvious that it should be at the earliest possible moment. It is possible that this question of when the Department is to be established will be dealt with on its merits by the new Union Government at Ottawa. On the other hand it may be considered that public opinion is indifferent and nothing need be done. We, therefore, have pleasure in serving notice on the Federal Government that: unless it can be clearly established that this matter must wait until after the war, and further that other less vital questions shall not receive prior consideration because of political expediency; we are prepared to show that public opinion is in sympathy with the earliest possible action directed to the end that Federal public health matters may be dealt with by a Federal Department of Public Health. Furthermore Federal or National public health questions relating to infant welfare, industrial hygiene, immigration, social hygiene, mental hygiene, housing, sickness, insurance, etc., are problems which do not demand attention only when a Government sees fit to deal with them. They are basic things in social welfare and must not be sacrificed to political expediency. First and foremost we must win the war. If this and this alone is to receive immediate consideration at the hands of the Government, well and good, everything else must wait; but if anything else is to receive consideration one other question only is of paramount importance that is the establishment of a Federal Department of Public Health to deal with the big broad questions of social welfare outlined above. Sickness and poverty alternate as cause and effect; the cure or greatest possible degree of alleviation of these is the biggest thing in public health. Canada has shown the way in Flanders; let her be big enough to do so at home.

A Statement of Policy

With the present issue THE PUBLIC HEALTH JOURNAL makes its appearance in a new form which will doubtless add to its attractiveness. Although the outward appearance of the Journal has changed, its policy, as always, will continue to be one of steadfast endeavour for the cause for which it exists.

The principles of public health are broad and the editorial policy of the Journal will be to make the discussions in these columns cover as extensive a field as possible. Public Health in the popular mind once seemed to largely mean sanitation, ventilation, and sewage disposal—a philosophy based on the theory that dirt and disease go hand in hand. Such a theory, admirable as it was, had its limitations. To-day Public Health means the welfare of mankind—its study, the examination of the means of sustaining man in health and happiness. Such a conception of the subject will be fundamental in both the Editorial and other columns of the Journal. Articles will be accepted as much because of their general as because of their purely scientific value. Mental Hygiene, Social Hygiene, Social Welfare and Politics, in addition to subjects of a more purely medico-scientific character, are well within the scope of Public Health and will each contribute its quota of information to our readers.

It is essential that a magazine which essays to strive for the public welfare should have a policy of untrammelled action. This magazine proposes to act vigorously in the prosecution of all aims which seem likely to raise the health, strength and efficiency of the average Canadian citizen.

Advertisements accepted by the Journal must be of a reputable character and will be subjected to the closest scrutiny before being admitted to the advertising columns. The very obvious fact that Canadian newspapers and magazines frequently permit their advertising space to be occupied by material containing statements which are untrue and misleading to their readers makes it all the more necessary that this Journal should lead in only accepting clean, reliable advertising from reputable firms.

Furthermore the editorial utterances of the Journal will stand by themselves and will not be influenced in the slightest degree by its advertising. With this brief statement of policy THE PUBLIC HEALTH JOURNAL for 1918 makes its debut and stands ready to serve its readers in all matters making for the Public Health.

“Life” and Public Health

The attitude of “New York Life” on the war has been one to inspire the admiration and respect of all Canadians. A constant and consistent hatred and criticism of the ideals of the Hun as well as a fearless advocacy of the cause which the Anglo-Saxons and their Allies hold dear has been an inspiration to lovers of democracy the world over.

It is with the regret with which one finds fault with a friend, then, that we find it necessary to criticize. Unfortunately "Life's" fault is so blatant that people interested in public health have avoided reference to it only because of the other sterling qualities which "Life" exhibits. Frankly, however, the journal's attitude towards the physician is absurd and as it evolves a slur on public health activities in general, intolerable.

A case in point is a cartoon in the number of November 8th. Here a picture is shown of two army surgeons and a nurse standing at the bedside of a patient.

One officer remarks: "You say he has both typhoid and small-pox. Wasn't he inoculated and vaccinated?"

The other officer answers: "He was. For both".

The inference is obviously that small-pox inoculation and anti-typhoid vaccination are useless. And the worst of it is that such a cartoon is practically typical of "Life's" attitude on such questions.

The value of small-pox vaccination is established except in the minds of persons who are either poorly educated or fanatics. Similarly anti-typhoid vaccination has saved the lives of many thousands of men fighting for the cause of the Allies on the western front. A comparison of the ghastly "enteric" record of both the Spanish-American and Boer wars with the magnificent health record of the present war will make this fact clear. It is well to note, too, that both British and American officers have had a part in proving the efficacy of this wonderful life-saving instrument. "Life" sneers at the whole business.

One wonders whether behind this curious attitude towards the physician and all his works—"Life" would say "the devil and all his works"—there is not some explanation beyond mere stupidity and maliciousness. Frankly, speaking generally, one inclines to look on "Life" as rather clever.

In the light of modern public health achievements by great and revered Americans whose work has resulted in a wholesale elimination of disease in America and elsewhere one is prone to suspect the well known magazine of owning stock in a mausoleum company. In this case "Life" must be losing money, and an explanation is available for its remarkable and pernicious activity. Speaking seriously, however, the PUBLIC HEALTH JOURNAL desires to formally protest against the attitude of its greater contemporary which on the question at issue has found it possible to be unpatriotic, uncharitable and silly.

Announcement
TO
Physicians, Public Health and Social Workers
OF THE
United States and Canada

The Metropolitan Life Insurance Company invites physicians, public health and social workers to make use of its valuable collection of mortality statistics.

These statistics present the principal causes of death among white and coloured wage-earners in the United States and Canada. The material covers over ten million individuals for each of the six years, 1911 to 1916. Death rates are available for each race, by sex and by age period.

The Company hopes in this way to aid in the study of disease and disability among wage-earners. It desires to stimulate medical investigation and research. By offering these statistics to the medical profession and to public health and social workers, the Company expresses also its appreciation of the co-operation which it has received from physicians and others who have replied to inquiries and have given detailed information in thousands of cases. This assistance has helped to make the statistics more accurate and valuable.

All inquiries should be addressed to

STATISTICAL BUREAU,
METROPOLITAN LIFE INSURANCE COMPANY,
One Madison Avenue,
New York City.

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SICKNESS INCAPACITATES MORE THAN TWO PER CENT.
OF THE WHITE WAGE-EARNERS IN CERTAIN
PENNSYLVANIA CITIES

Serious sickness disables more than 2% of the white wage-earners in representative Pennsylvania industrial communities, according to a study recently made by Lee K. Frankel and Louis I. Dublin, of the Metropolitan Life Insurance Company. In all, more than 300,000 men, women and children in the coal mining and iron and steel areas of middle and western Pennsylvania were included in the inquiry.

Sickness more Prevalent among Miners than among Iron and Steel Workers

Anthracite coal miners showed a rate for disabling sickness of 23.5 cases per 1,000 enumerated; bituminous coal miners showed practically the same rate of serious sickness, while iron and steel mill employees in and around Allegheny County had a much lower rate, 18.8 per 1,000 observed.

Accidents Most Frequent Cause of Disability

Accidents and injuries were the most important causes of disability, accounting for more than 11% of the cases in the entire group. A number of diseases were prevalent in epidemic form. Influenza was responsible for nearly 8% of the total cases of disabling sickness and pneumonia for 6%. In addition, tuberculosis accounted for more than 3% and rheumatism for nearly 8%.

Medical Attendance in Three-fourths of the Cases

One case of sickness in every four was serious enough to confine the sick person to bed at home. Hospitals cared for about 10% of the total cases of sickness, although among iron and steel employees nearly 13% were in hospitals. A physician was found to be in attendance upon disabling sickness in more than three-fourths of the cases. Bituminous coal miners and iron and steel mill employees showed medical attendance upon sickness in over 80% of the cases.

About One-third of the Sick Receive Benefits

Thirty-two per cent. of the adult male wage-earners and about 40% of the miners and the iron and steel workers, sick and unable to work, were found to be in receipt of sick benefit insurance.

On the basis of the results of this inquiry, the Metropolitan Life Insurance Company has concluded that, all things considered, serious sickness is no more prevalent among the wage-earners of middle and western Pennsylvania cities than among wage-earners surveyed in other representative cities of the United States.

War-time Sanitary Measures

As additional evidence of the thorough spirit in which the United States of America are dealing with conditions arising out of the war comes the announcement that Congress will shortly enact a law providing a reserve corps for the public health service. The original measure, which had the approval of the Public Health Service and the Treasury Department, passed the Senate and was referred to the Committee on Interstate and Foreign Commerce of the House. This committee has already reported, recommending the measure in the form of a bill; and while the committee has made some modifications they are not seriously in conflict with Senate's measure. The bill provides for a reserve corps to be composed of the officers of state, county and municipal health organizations and other persons skilled in sanitary science. Such officer must make voluntary application to the Surgeon-General for appointment, and, with the assent of the proper executive, officers of the respective states, counties, and municipalities, may be commissioned with the grade of assistant surgeons, past assistant surgeons, surgeons, or senior surgeons in the Reserve Corps of the Public Health Service for four years, or during the war. Sanitary engineers, assistant sanitary engineers, epidemiologists, and assistant epidemiologists on the recommendation of the Surgeon-General, may also be commissioned as such. The duties of the reserve corps shall be directed toward the proper sanitation of ports and places within the United States or within its jurisdiction, especially places in which or near which industrial and military forces are to be mobilized, in which the corps shall co-operate with local health organizations and officials in charge of industrial establishments. The bill provides for an elastic organization which may be immediately expanded, whereby the government can instantly attack civilian epidemics which threaten to spread to military forces, which permits sanitation under federal direction of areas in contiguity to military camps, augments existing agencies for the collection of morbidity reports and brings into the service of the United States as an aid to military operations a body of highly-trained sanitarians, engineers and epidemiologists who would otherwise be unavailable for military duty.—*The Medical Officer.*

The Proposed Ministry of Health

Dr. Addison, Minister of Reconstruction, speaking at the recent meeting convened by the Faculty of Insurance, declared his belief in the urgent need of creating a Ministry of Health with widely decentralised powers and of bringing its machinery into thorough working order before the end of the war. He stated that he had been specially invited by the Prime Minister to cope with this, one of the most important of the many problems of reconstruction. The public conscience was fully alive to the obligations of the State in regard to it, and was not in the mood to brook any further dilatoriness. But the national administration of public health through such a Ministry as they contemplated must necessarily impinge on many interests, and it was necessary to bring those interests—insurance, local government, medical, and others—into substantial agreement before legislation could usefully be framed, since Parliament had not the time to debate highly contentious proposals. He appealed, therefore, to all interests concerned to sink minor differences and to approach the problem of public health administration as a whole from the broad standpoint and in a courageous spirit.

In the course of his speech, Dr. Addison referred to the effect of environment and working conditions on industrial output. "The Ministry of Munitions," he said, "got together a number of people, under Sir George Newman, and asked them to study the various aspects of the question as it affected munition workers. Hitherto it has been nobody's business in particular to find out these things. But health is power, and one of the vital matters after the war is that we should increase the productive capacity of the nation. Investigations of this kind are of a singularly important and fundamental character, because we shall only get the best and most intelligent work out of people by employing them under the best conditions. We should have a central authority. What is it to do? Obviously it would concern itself with matters affecting diseases, their origin and their treatment. You could not deal with this department unless you had power to deal with matters affecting sanitation, water supply, and food. Then there is housing. It is impossible to consider the slums that exist and the unsatisfactory rural housing without recognizing that the housing problem is one of the most important elements in the health problem. You cannot conceivably dissociate the proper provision of housing from health organization. Then you have the great and growing functions attached to

insurance committees as they affect the health, and the great branch of our health service connected with the poor law. Health is something quite different from destitution. I am quite sure we are not entitled to label ill-health poverty. I do not believe that when our soldiers come back from the war debilitated and under the charge of the Ministry of Pensions public opinion will sanction their being in any way labelled paupers. We cannot afford not to make the best and most intelligent use of the organization which has been created to deal with health in connection with the poor law. A good hospital must not be scrapped because hitherto it has been called a poor-law hospital. Further, there is the question of a working agreement between the insurance organizations and the local administrations.

"But the first thing is to get your plan right, to get your central thinking department on the right lines. I do not anticipate that anybody nowadays, after the experience of war control, will want everything to be done by a department in Whitehall. There must be a great measure of decentralization. Otherwise you will get a central department greatly overweighted, far too congested with the ordinary routine of administration, and too removed from the feelings of public opinion in the localities. While we recognize a central department as necessary, we must bear in mind that there are limitations to what we ought to do. The first thing it will have to do will be to work out a proper health plan, to formulate a proper health policy; and the necessity of the situation at the present moment is to get a body created whose business it is to do that. The Government have no time now in Parliament to carry through a highly controversial Bill. If we are to make progress we must get a sufficient measure of agreement in advance. It is not the fact that the departments are fighting one another anything like so much as that you have a number of keen men absorbed in their own department's work and not having time to know what men in another department are doing and what are their difficulties and perplexities; not so much rivalry as men on different jobs with different machines. As Minister of Reconstruction it is my business to work with Government departments. I do not find that when I put before the departments a big problem departmental rivalries bulk anything like so largely as people suggest. I do not find it is difficult in a great big issue to get men to see the thing as a whole. That ought to be said in defence of those men and women who are running our departmental services and are often accused of a stickiness which really does not belong to them.

"It is a matter which will not wait. It cannot wait longer than the time in which we can get ready a concrete and comprehensive plan, because when the end of the war comes you will not only have demobilization, but the great war tension which has kept people up to the mark will

relax, and the burden thrown upon the health authorities will be unprecedented. We ought by that time to have got our machine in order, and competent to deal with the burden. There are three or four things which ought to be thought out and arranged before then. (1) The whole question of hospital organization. (2) The whole question of the nursing and midwifery profession. (3) The whole question of the relations of the State health administration and the medical profession—a thorny and difficult subject.

“We shall not have to do things by halves if we are to survive as a nation without generations of distress, and one of the things that lie at the root of progress is improvement in the health of the community. There is immense room for it, and unless we provide the country with a powerful and efficient health organization which will grow on the right lines posterity will blame us for either cowardice or neglect.”—*The Medical Officer*.
